

# MENTORING MODELS IN ENTREPRENEURSHIP EDUCATION

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## Abstract

Entrepreneurship and innovation are regarded as two of the most important driving forces of welfare development in our times. In policy documents throughout Europe, governments increasingly see entrepreneurship education as a crucial vehicle contributing to future economic growth. A key factor for future innovativeness and growth in society is the supply of competent individuals that are motivated to become entrepreneurs inside and outside of established organisations.

This has created an incentive for nurturing the development of creative and enterprising skills through so-called new venture planning (NVP) pedagogies in higher education. According to the contemporary perspective on entrepreneurship education, learning activities such as NVP courses allow learners to initiate, apply knowledge, strategize and act, rather than just one-dimensionally developing academic skills of observing, describing and analysing. The argument behind this is that entrepreneurial skills and expertise are largely tacit and socially constructed, and therefore have to rely on experiential action learning approaches. NVP courses try to simulate the actual experiences of developing a new venture by creating an educational setting where “real life” entrepreneurial learning can take place. The overarching learning goal of NVP pedagogic practices is to contribute to the development of an entrepreneurial mindset in students.

In experiential action learning, the “stage” belongs to the students while the teacher role is often to work “back stage” to ensure the optimal supported learning environment. Such learning is therefore student-centred and requires another approach to teaching that is closer to mentoring. Mentoring has for long been recognized as an effective intervention for personal and career development, since mentoring supports both the necessary psychological development and skills-based training. Consequently, mentoring may be regarded as an essential ingredient in the entrepreneurial learning process and contributor to increased learning outcomes. In this paper we employ the term “entrepreneurial mentoring” as an umbrella term to explore the different mentoring roles that can be found in experiential action-based entrepreneurship education in higher education institutions. The aim of this study is to map out the key aspects of mentoring functions and strategies in entrepreneurial mentoring. This will serve as a starting point for developing a conceptual framework for future studies.

Starting with the above arguments and background, we build on a comparative case study to explore these different entrepreneurial mentor roles by zooming in on two successful NVP courses at the Norwegian University of Life Sciences and Telemark University College, respectively. These courses are currently taking part in a nationally funded programme on mentoring for entrepreneurial expertise in higher entrepreneurship education in Norway.

From our findings and analysis, a model depicting four mentor roles in entrepreneurial mentoring can be derived. This model may be helpful for future empirical examination of mentoring styles in entrepreneurship and serve as a fruitful guide for those who design and implement mentoring in entrepreneurship education.

Keywords: Experiential action learning, entrepreneurial learning, new venture planning (NVP), mentor roles.

## 1 INTRODUCTION

### 1.1 Defining entrepreneurship education

Entrepreneurship and innovation are regarded as two of the most important driving forces of welfare development in our times. According to the influential work of [1], entrepreneurship can be regarded as a transformation process of discovery, evaluation and exploitation of opportunities into new products and services. Entrepreneurship as a phenomenon also implies a process that is not only

restricted to the establishment of a new business, but is also a dynamic, action oriented and creative activity [2].

Entrepreneurial knowledge and expertise is largely tacit [3] and socially constructed through learning by doing [4-6]. Therefore, several scholars regard entrepreneurship as an experience-based process of learning [7-8], and successful entrepreneurs are excellent and self-directed learners [9-10]. This perspective has created an incentive for establishment of various specific entrepreneurship and innovation programmes in higher education [11]. For a long time, however, this type of education has been met with scepticism and resistance in academia. Many scholars have asked whether entrepreneurship actually can be taught? Despite this ongoing debate regarding the teachability of entrepreneurship, there is a general understanding that there are some unique skills and competencies, which are fundamental for entrepreneurial activities. The so called “hard facts” about business creation and management, e.g. developing a business plan (the easily teachable parts), as well as the more general “soft skills”, such as creativity, pro-activeness, action orientation, leadership and communication skills (the less teachable parts) are all fundamental for entrepreneurial development [12]. Ref. [13] make a distinction between learning *about* entrepreneurship as a phenomenon, and learning useful skills, competencies and attitudes in order to *become* an entrepreneur or at least become more entrepreneurial. It seems evident that developing the latter part cannot be accomplished in a traditional classroom set-up.

Despite of the present opportunities for developing entrepreneurial individuals through education, ref. [14] argue that the current higher educational system has a long way to go in order to becoming capable of offering relevant and appropriate pedagogical learning arenas for entrepreneurial development. Ref. [15-16] have addressed the question of entrepreneurial learning in educational practice and how such learning can be simulated in a student environment. One way to simulate this type of learning is through so-called specialised new venture planning (NVP) pedagogies which emphasise learning-by-doing approaches and action learning [16]. To conclude, we agree that entrepreneurship cannot be taught in a traditional way, but we as teachers can *facilitate* learning and learning experiences.

## 1.2 A generic model of a NVP course

The NVP pedagogy can be positioned within the so-called “action-based entrepreneurship education” paradigm [13], in which students are faced with real-life challenges through the discovery, development and evaluation of a concrete business idea into a business opportunity. For example, pitching their project in external arenas or participating in competitions creates time pressure and challenging milestones. At the end of the course, the business proposition in form of a business plan is presented to “business investors” and relevant external partners (such as Junior Achievement – Young Enterprise) for evaluation, final assessment and grading. This means aligning the pedagogy with close to real “entrepreneurial learning” by letting the academic performance and grading be directly linked to project fulfilment and success. Below is a general model describing an NVP course consisting of four generic phases:

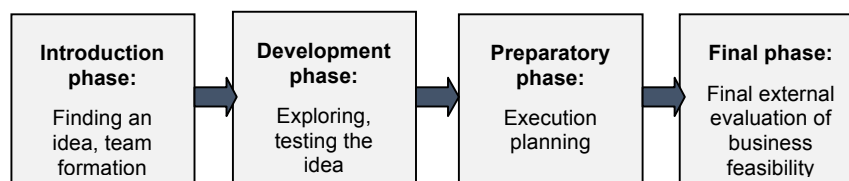


Fig. 1. A generic model for a New Venture Planning (NVP) course.

In NVP courses, students work on real problems that have no clear answer or solution. Instead, they create a social learning context that offers an opportunity for students to learn from trial and error and to grow personally in collaboration with their peers. However, in order to maximize the entrepreneurial learning experience, it depends very much on the educators how this learning process is orchestrated.

## 1.3 Relevance of mentoring in NVP

The particular learning format in NVP requires a complete transformation of the teacher role, more towards mentoring (skill based and personal support). Additionally, making use of an external network,

such as specialists and entrepreneurs, can challenge thinking, maximize team performance, and hence improve final project success [15].

Ref. [17-18] suggest mentoring as a more personalized learning process that can be a valuable tool for developing business skills of entrepreneurship. Furthermore, mentoring is a relevant concept to be used in our context because mentoring is especially directed towards facilitation of 1) learning skills and competencies (career and behaviour related functions) and 2) to the personal development and support [19]. The mentoring interaction can facilitate a more efficient and secure transfer of complex experiences into learning [20]. Recent studies have demonstrated mentoring to be effective in the development of entrepreneurial expertise [21-23]. To our knowledge, no study has yet been conducted to explore the phenomenon of entrepreneurial mentoring in the field of entrepreneurship education. Our study on mentoring roles therefore addresses important pedagogical topics called for in the field of entrepreneurship education research and practice. The foundation for this paper is a recently granted best practice educational project in Norway, named "The mentor role as element in entrepreneurial expertise". We explore these different entrepreneurial mentor roles by zooming in on two successful, yet very different NVP courses. The aim of this study is to map out the key roles and their functions as a starting point for developing a conceptual framework for entrepreneurial mentoring in entrepreneurship education.

## 2 METHODOLOGY

In this paper, we build on the described theory and generic model of NVP to conduct a comparative case study of two NVP courses at the Norwegian University of Life Sciences (NMBU) (hereafter Case 1) and Telemark University College (TUC) (hereafter Case 2), respectively. Our case selection is based upon an "information-oriented approach", see p. 229, [24]. By this, we mean when the objective of the research is to obtain the greatest and most interesting type of information from a given phenomenon (here referring to mentoring in the domain of entrepreneurship education), a representative, average or typical case may not provide the richest information to the phenomenon of interest. Our goal is not to generalise, but to achieve a deeper understanding of entrepreneurial mentoring and to locate the mentoring models in our cases. More specifically, we choose a "maximum variation strategy", see p. 230, [24], and select two very different cases (from the national mentoring project described) that vary along several important dimensions as depicted in Table 1:

Table 1. Features of the two NVP cases.

<b>Dimension of variation</b>	<b>Case 1</b>	<b>Case 2</b>
<i>Disciplinary origin</i>	Business Administration	Engineering
<i>Student sample background</i>	Mixed (mainly social sciences)	Mainly trade certificate holders
<i>Opportunity selected</i>	Students develop ideas for external partners	Students develop own idea
<i>Mentoring focus</i>	Internal focus (co-creation)	External focus (networking)
<i>Business plan competitions</i>	1-2	5-9

The data from the selected cases are based on several sources of information. Both cases have existed for ten years and build on a basis of accumulated experience with entrepreneurship education. The data forming the basis for this study arrive from three best-practice sharing meetings in the mentoring project and from one day of mutual information exchange/interviewing between the authors. Since the objective is to explore how entrepreneurial mentoring can be interpreted and understood, a participatory involvement strategy is regarded as an essential condition for this particular study. It is therefore not necessary that the authors should be "objective" observers of the phenomenon, and we are aware of our role as participants rather than objective observers.

## 3 CASE PRESENTATIONS AND RESULTS

### 3.1 Case 1

#### 3.1.1 *Organisation, course structure and pedagogical philosophy*

Entrepreneurship in practice is a 15-ECTS course and takes part in a well-established master programme in entrepreneurship and innovation at the School of Economic and Business at NMBU. This programme recruits students from all over the country with different backgrounds in their bachelor (economic, design, marketing, teaching, nursing, etc). The students can select from a diverse set of business ideas brought into class by different external partners (hereafter referred to as clients) consisting of entrepreneurs, start-up companies or established companies in the regional business network (innovation projects). There are two main benefits of working for clients with regards to the networking aspect: 1) The students are experiencing an authentic social work-life practice, and 2) the students broaden their own network by gaining access to relevant parts of the client's network. The course curriculum consists of an interplay between "tool-box" theoretical short lessons (providing business development tools), guest lectures from entrepreneurs, workshops facilitated by the lectures in the classroom, independent team work and reflection about practice meetings. The supervisors have the responsibility of providing structure for the business plan, which is broken down into four assignments in the course design. By adopting a co-creation platform of learning, we notice that student learn best when they can work to develop new insight and knowledge together with their peers, their client and supervisors.

In the course, each team is assigned a dedicated peer-mentor in the beginning of the course. The peer-mentors are second-year master students that have completed the same course the year before, and have completed a three-months internship in an American start-up company. Furthermore, the peer-mentors have undergone a training course in entrepreneurial mentoring, focusing on general mentoring skills, as well as how entrepreneurial learning can be enhanced and supported in fellow students.

#### 3.1.2 *The entrepreneurial learning process and mentoring*

##### **1. Introduction phase: Finding an idea and set up a team**

A key feature of the course is its social aspect. From the start of the course, the students are teamed up into cross-disciplinary project groups of 3-4 students. The teams have to develop and sign a team contract regulating team roles and plans for teamwork. In this phase, the students are in a start-up process by selecting an idea. The supervisors' role is to work "back stage" in facilitating this process and ensuring an optimal match between the student teams and chosen ideas. Clients are most often entrepreneurs in start-ups or established enterprises looking for feasibility evaluation of innovation projects. At the outset, they function as role models and inspirators for the students to get started. The set-up of the course presents the students with several different role models. External successful entrepreneurs are in the beginning invited to give a lecture about their personal learning process and the story behind their venture success. At the end of this phase, students are introduced to their peer-mentors. Since they are more experienced with venture planning, they have a role model function. Hereafter, the frequency of mentoring is totally up to the mentors and mentees, but the course design has implemented peer-mentoring at all important milestones in the subsequent phases (the four assignments related to developing the business plan).

##### **2. Development phase: Exploring, testing the idea**

In the development stage of the process, the student team work independently between lectures, typically outside of the classroom. The teams are conducting market research and external competitive analyses in cooperation with their clients, as well as tests on real potential customers. In other words, students are planning and taking action. In this phase, one competition is arranged with external IT-experts. The student teams work for one day with the Microsoft Corporation in developing their idea with respect to multiple technologies and communication solutions. The best idea and team receive a reward, yet after this day all teams have expanded their ideas and received expert advice along with valuable and updated feedback. In this phase, the peer-mentors are consulted on a regular basis by the student teams. In order to be able to learn from practice, the peer-mentors and supervisors facilitate reflection on two levels (in and about practice). Reflection in practice is assured through the two assignments and milestones in this phase, where each assignment includes a meeting with their peer-mentor and a short reflection in practice report. After having completed the

assignments, the teams, peer-mentors and supervisors get together in a “reflection about practice” meeting to make sense of the learning experiences, link it to entrepreneurship theory, and stimulate for further actions. The students have responsibility for the agenda and for bringing up important and particularly challenging issues in these meetings.

### **3. Preparatory phase: Planning for execution**

In the preparatory phase the teams focus on financial forecasting, risk assessment and execution plans on how they recommend the idea to be realised in the marketplace. In this phase, the teams use their clients as advisory partners in order to provide the most suitable business fundament for the idea. The peer-mentors also have an advisory role here, by giving the teams advice on how to capitalise on team strengths, how to strategically get in touch with external partners, how to plan for accomplishing the final plan, how to pitch their idea and so forth. Thus, they have an advisory role with respect to how to behave in entrepreneurial ways, and less regarding the feasibility of the business plan itself. This is a clear distinction to be made, since the peer-mentors have little domain-specific expertise in business development. Expert advice outside the classroom is consulted on the teams’ own initiative and most often found through the client network. The supervisors function as security net and monitor and carefully facilitate the team process, as team conflict might arise as time pressure becomes evident. When considered necessary, the supervisors facilitate team process through individual team meetings. Before the last phase, a “reflection about practice” meeting is again held, as described in the previous phase. Here we emphasise on challenging students’ thinking, since teams are now converging towards a “solution”. Our role as supervisors is to trigger the teams to consider more than one possible solution.

### **4. Final phase: External evaluation of business feasibility**

In the end, the teams present the business plan in three distinct situations, two external and one internal (the exam). The first external presentation is arranged as a pitching competition with a winning prize between the teams. An external venture panel with real-life experience in assessing business plans, consisting of advisors at the TTO (University technology transfer office) and Innovation Norway (National funding organisation), is invited in to evaluate the real market potential and realism of the business ideas. Additionally, the teams have to deliver and present the business plan to their clients in a board meeting or the like. This practice prepares them for the exam, in which, again, the presentation of the business plan is evaluated as a team performance. The role of the peer-mentor is to coach the teams to perform the best in these arenas, e.g. goal-oriented assistance and backing to maximize achievements and success (winning the contest and getting a good grade). A workshop is arranged by an experienced former student in the master programme and entrepreneur for training pitching capabilities and sales skills in order to aim high in these areas.

## **3.2 Case 2**

### *3.2.1 Organisation, course structure and pedagogical philosophy*

Entrepreneurship at TUC, Faculty of Technology has its own teaching philosophy and entrepreneurial methods. Most of the courses in the engineering bachelor programme at TUC are based on traditional lecturing with a clear and defined curriculum. The teaching method in entrepreneurship is focused on business development results, not the curriculum. By taking this course, the students will gain a more practical approach to learning; they will have more freedom and take on more responsibility themselves. The students must build their own network, seek information and gain knowledge more on their own. A more thorough description of the pedagogical philosophy can be found in [25].

TUC has, since the start of the programme in 2004, had a focus on entrepreneurial competitions for skill development. The external network is highly emphasised to achieve this goal. The faculty has a close connecting to three non-profit organisations in the innovation system that help us in making realistic arrangements with focus on business plan competitions. These three organisations are Junior Achievement – Young Enterprise Telemark (JA-YET), Connect and Start. For help and support along the way, the faculty will provide two supervisors and the students will select one to three external mentors from business life, who will also contribute. Mentors are often dedicated retired leaders from industry, successful innovators or experts in their field. The mentors are non-paid and the mutual benefits of mentors and mentees is important. TUC supervisors do not interfere or give the mentors any advice. Together with supervisors at TUC, external mentors and actors from the innovation system, every team will have a powerful learning arena. The student teams have to form a formal

Student Enterprise (SB is the suffix used in Norway). Each week the main supervisor meets the SB for a duration of typically half an hour. Each SB takes responsibility for arranging these meetings.

### *3.2.2 The entrepreneurial learning process and mentoring*

#### **1. Introduction phase: Finding an idea and setting up a team**

The second year of the engineering programme contains a one-day Preludium which is arranged in the beginning of May each year. The Preludium provides information and hopefully motivation to students who can choose Entrepreneurship as an optional course in the Autumn semester. The Preludium helps students to start the process of entrepreneurial thinking at an appropriate time and is important to get a good start on their business idea brainstorming process. The students have to create their own business idea independent of their supervisors or any external contacts. In addition, the students themselves have to form teams with a size of 3-6 students. The lecturers at the Preludium are former entrepreneurial students, supervisors, course administrator, a professor of Entrepreneurship from University of California, Berkeley, JA-YET and Start. Thus the students have a planning and maturing process of good three months before the official start at the end of August. The students will not be actively mentored by the supervisors in this period. However, the course administrator has a lot of work to do in facilitating the Autumn course.

#### **2. Development phase: Exploring, testing the idea**

After the Kick-off at the end of August, each student group will develop a preliminary business idea that has to be registered, as the next milestone, in the beginning of October. When they are formally registered in "The Register of Business Enterprises" as an SB, they can get a bank account and start the process of developing the SB.

The main supervisor's most important task now is to not have any antipathies to the business idea. If the supervisor feels that the business idea is not realistic or technically impossible to produce, critical questions can be asked to promote reflection in the student team. The next step is usually to check the market in one way or another, in order to find the demand or need for the product or service. This is typically the most difficult part for the students, since the market is quite merciless. Once the students have experienced this difficult development phase and have received valuable support from their supervisors and advice from external mentors, they are ready to experience their 1<sup>st</sup> competition, named Springboard®, arranged by Connect in November. It is a two-step competition. The first round, the three best SBs from all participating faculties at TUC are assessed. The final examination takes place with a full audience at the theatre in the county capital. At this stage the students are somewhat fragile and new to competitions, so constructive coaching through supportive feedback from supervisors and mentors is important. In December, the internal exam is arranged in order to grade the 10 ECTS course Entrepreneurship, thus the supervisor will assume the role of an evaluator.

Not all students will continue to choose the next optional course named Student Enterprise. In January 2015, 22 of 39 students continued and the number of SBs was reduced from eight to five.

To present a business idea is a performance and it is important to be able to pitch the product or service both to investors and the audience. Thus, the first milestone in the spring semester course Student Enterprise is to prepare a "two minutes to convince" presentation in March. During this module, the SB will first go through an internal pitching test and subsequently get separate feedback from their supervisor, the external advisor from Connect and an instructor from the local theatre group. All of these function as coaches to give feedback when students train their skills in pitching a business idea. After the first test and a formal business lunch, the SB will be tested in the 2<sup>nd</sup> mandatory competition in front of an open audience comprising other students and lecturers. All students are prepared to act like investors and are given 50 000 units of a fake currency. The students will invest this fake money in the SB's that they have most confidence in. The results from this audience competition are well correlated to the subsequent assessments of professional juries.

#### **3. Preparatory phase: Planning for execution**

In March and April, the students are supposed to develop a prototype in case of a product idea or start selling services in case of a non-product idea. The focus on competitions is now intensified, and the business plan from the previous course will be updated and improved several times. The 3<sup>rd</sup> and 4<sup>th</sup> business plan competitions are arranged by the student organisation Start. These competitions named Venture Cup has a final round for all those SBs that qualify in region Norway East. The jury in this competition is comprised of professionals and the monetary prize is rather high. The role of the

external mentors here are very important in terms of concrete advice and challenging feedback and now the supervisors should act more like coaches.

The most important and final mandatory competition is the Telemark County Championship Student Enterprise arranged by JA-YET in the beginning of May. In this competition the students are tested four times: 1) Business plan, 2) Two minutes to convince, 3) Stand and 4) Panel interview. The five best SBs from all faculties at TUC are qualified for the Norwegian Championship Student Enterprise in June. In this phase, the SBs will be subject to a lot of pressure by the juries and audience in order to improve the product prototype or the quality of the services provided. The supervisors' primary role in this critical phase of the venture planning process is to function as coaches, providing both support and feedback on the performances during the end of the semester (April-June).

#### **4. Final phase: External evaluation of business feasibility**

In the final phase, the course has a strong emphasis on using milestones for keeping focus, motivating, ensuring progression, evaluating and giving feedback. The supervisors will promote a clear and distinct strategy concerning the media, including social media. In the past, students from TUC have qualified for the Norwegian SB Championship, and for them, this event in the beginning of June will be the final exam for the course. Those SBs not qualified will have their examination on campus the day before. The grades are formally given by the two supervisors, but the results from all competitions with external juries will typically have great influence on the final grade. The role of the mentors here are as coaches backing and encouraging their SBs, while the supervisors are now evaluating the SBs in order to grade. Not every year, but very frequently, some of our students qualify for international competitions or national competitions for all students in Norway. In the end of the Student Enterprise course, the students are required to liquidize their own SB in a general meeting, and hopefully re-establish the enterprise as a regular limited corporation.

## **4 ANALYSIS AND DISCUSSION**

In this study, the aim was to explore the different mentor roles in entrepreneurship education. By comparing and contrasting two quite different pedagogical operationalisations of entrepreneurial learning through New Venture Planning pedagogies, we are able to explore some of the facets of entrepreneurial mentoring. At the centre of mentoring is the concept of more experienced personnel assisting and supporting less experienced students, providing structure, advice and examples.

In Case 1, originating from business administration employs a co-creation principle focusing on primarily modelling and facilitation for reflection, e.g. learning from and with peers and clients. In this case, the supervisors function mainly as learning facilitators of collaborative learning and reflection about practice. Rather than directing students explicitly on business development of the ideas, these elements are scaffolded through the assignments provided in the course structure. While students in this programme have different educational backgrounds, the maximum co-creation potential can only be achieved if the pedagogy emphasizes and focuses on process orientation and resource orchestrations. In this case, the external actors are used as role models, inspirators and advisors, and they are, hence, brought *into* the learning process as resource partners in order to maximize collaborative learning. In Case 2, we have a homogenous sample of students with a technical background. Here, the external actors are not invited in, but rather the students with their emerging businesses are pushed *out* for feedback and evaluation on business development. This NVP course is utilising competition through networking as the main pedagogic learning platform. The course relies heavily on external regional business partners as advisory mentors on business elements and the innovation system for providing feedback through competitions. Mentoring is goal directed towards the milestones, and the supervisors function as coaches, facilitating student teams to achieve their best in the external competing arenas provided in the course structure. This kind of coaching is a form of support that is more goal-oriented and task specific in comparison with what we associate with more traditional forms of mentoring.

Mentoring is a complex support process and a two-dimensional model from the field of teacher education has shown to be a relevant analytical lens for how mentoring can be conceptualised [26]. Utilising a two-dimensional conception, our case study provides two relevant aspects that help us organize how different entrepreneurial mentoring models can be interpreted. Our analysis indicates differences between two core dimensions in entrepreneurial mentoring, namely, "mentoring focus" and "objective-orientation". These dimensions emerging from our case data constitute a model which conceptualises four primary mentoring roles in NVP entrepreneurship education. These dimensions

are not sharply dichotomous. The vertical axis of the model represents the mentoring focus, i.e. expert centred (focus on active instruction from the expert to “receptive” learners) versus student centred (i.e. focus on learners steering the course of actions through interaction with the mentor). The horizontal axis represents the dimension of degree of goal orientation, with a continuum between the two poles; process and objective orientation, respectively. The combination of both dimensions yields four generic roles with corresponding mentoring strategies: “The role model” and modelling, “The expert” and counselling, “The learning facilitator” and reflection and “The coach” and coaching, see Fig. 2.

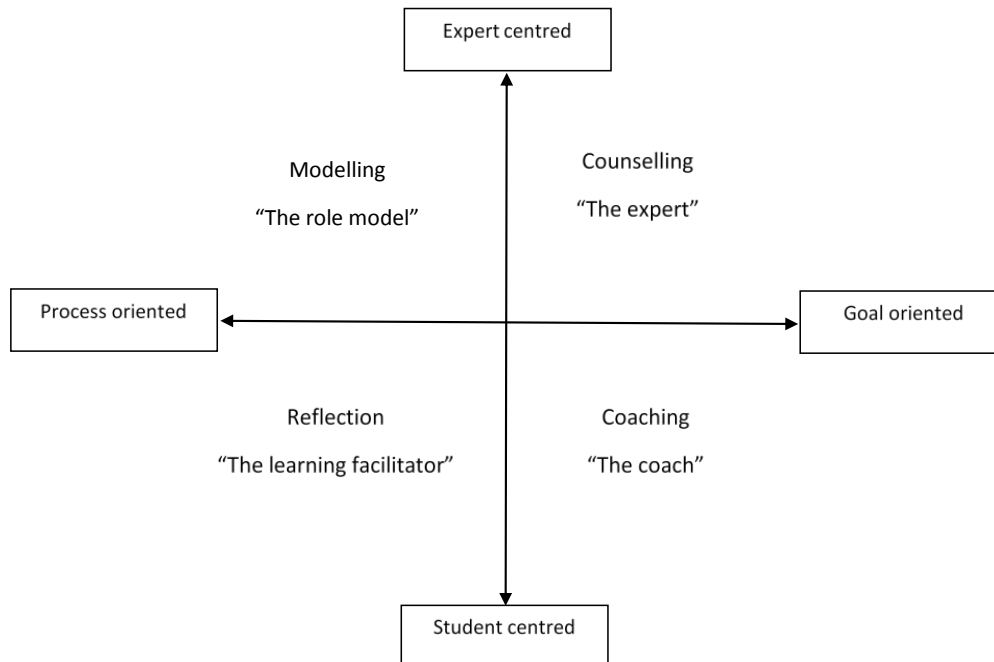


Fig. 2. Mentoring models in entrepreneurial mentoring.

The role in the upper left quadrant is referred to as “the role model”. Modelling, is a form of demonstration, in our context demonstrating the skills of the entrepreneur. The entrepreneur role model sets an expert example to be emulated by other aspiring entrepreneurs. In our cases we found entrepreneurial role models among peers, clients, external entrepreneurs and businesses and former students. The dominant function of the role model is “learning by example”. Other important functions are support and inspiration for building motivation. Ref. [27] found that such role models matter for entrepreneurial intention and that they have a particular influence in the start-up phase of a new venture.

The role in the upper right quadrant is referred to as “The expert”. The expert uses counselling skills by giving direct advice on what to do in a particular matter. When seeking advice the mentees often have a particular question and an explicit objective for the mentor, and the mentoring becomes goal oriented towards managing particular tasks. Ref. [22] demonstrated in their study that nascent entrepreneurs develop management knowledge through mentoring from a business expert, and that the mentor’s experience is an important source of concrete advice and know-how on how to manage and develop a business. Consistent with this research, we find in our cases that external business experts particularly function as expert advisors on business relevant matters. This effect on this type of learning is largely dependent on the competencies of the expert.

The role in the lower left quadrant is referred to as “The learning facilitator”. The facilitator sets up meaningful learning arenas, so that the students can build on their strengths and orchestrate their resources to become self-directed learners, a main mentoring strategy selected in Case 1. The learning facilitator helps guide the learning process by asking open-ended, non-directive questions. Here, the learners become responsible for their own actions and learning process, and the facilitator does not direct towards specific goals. This learning necessitates critical thinking about actions, and the facilitator asks pointed questions to make the learners think and find their own solutions. Ref. [28] found that this type of mentoring strategy was superior to more directive styles of mentoring when it



comes to entrepreneurial learning outcomes, career satisfaction and entrepreneurial self-efficacy for novice entrepreneurs.

The role in the lower right quadrant is referred to as “The coach”. In coaching, learners and coach work together towards the same goals, i.e. the performer’s goal becomes the coach’s goal, the mentees’ interests the top priority of the coach. To illustrate, for most people, the term coach initially can be associated with sports, e.g. the coach is helping the performer through concrete feedback to maximize his or her performance towards a particular goal [29]. In the same manner as in the previous mentoring scenario, the learners are self-directed learner defining their own way of working towards a specific goal, and the coach provides direct feedback on learning tasks on the way toward the goal. This mentoring strategy is most evident in Case 2. Ref. [30] understand coaching in the entrepreneurial context to be more specific learning customised to meet particular objectives, like managerial skills. It is less general than other forms of mentoring. They furthermore found that the success of entrepreneurial coaching is dependent on the learners’ readiness to change their attitudes and behaviour.

## 5 CONCLUSION AND IMPLICATIONS

From this study, it is apparent that the use of mentoring is something that cannot be implemented as a standard format. NVP pedagogies rely on a whole system of co-learning and networking between students, supervisors and external parties. We have also seen through these cases a variation in pedagogical philosophies and learning methods, which calls for diversity and flexibility of mentoring roles in educational practice of entrepreneurship education. We do not give a judgement of what is the best mentoring strategy or mentor role. Rather, a mentoring system in entrepreneurship courses must be purposely designed and aligned with the course philosophy and learning goals.

The focus of this preliminary study was to explore mentoring in the field of entrepreneurship education. For further research it would be of particular interest to investigate empirically the two-dimensional entrepreneurial mentoring model in different educational contexts with similar experiential pedagogies, and even explore the framework’s relevancy in general real-life entrepreneurial learning.

Mentoring programmes are dependent on support and cooperation from several players in the regional environment and demand a high level of internal coordination and organisation among faculty. Thus, a strong collaborative culture and community of practice is key to fostering advanced educational practices like mentoring. In this respect, we hope that this paper and model can serve as a more common language which will enable educators, practitioners and researchers to understand, interpret and implement efficient mentoring systems in entrepreneurial learning processes.

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